EA Form R 1/2001

Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. Applicant/Contact name and address: **Scenic Developers Inc**
937 S Cole Dr
Lakewood CO 80228 3079

2. Type of action: **Application to Change a Water Right No. 30006704 41I**

3. Water source name: **Ground water**

4. Location affected by action: **Section 18, T10N, R3W, Lewis & Clark County**
Section 13, T10N, R4W, Lewis & Clark County

5. Narrative summary of the proposed project, purpose, action to be taken, and objectives:
This application to change proposes to replace two irrigation wells in the SENESE Sec 13, T10N, R4W with two new wells in the NENESE Sec 13, T10N, R4W. Like the wells that they replace, the new wells will supply irrigation water to about 140 acres in Sec 13, T10N, R4W and Sec 18, T10N, R3W. Well logs for the old wells are not available, but they were measured to be 70 feet and 100 feet deep. The new well are planned for a depth of about 70 feet.

Water from the proposed wells will be combined with other water from Crystal Springs (in Crystal Springs Creek) that has been historically used on the irrigated field. The combined appropriation will be diverted farther downstream in the channel flowing from Crystal Springs.

The DNRC shall issue an Authorization to Change if the criteria in 85-2-402, MCA are met.

Agencies consulted during preparation of the Environmental Assessment:
(include agencies with overlapping jurisdiction)

Montana Natural Heritage Program
State Historic Preservation Office
Soil Survey of Helena Valley part of Lewis and Clark County, Montana

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity - Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.

Determination: **The water to be diverted is from ground water and combined with water from surface water sources. The change will not affect the burden on streams because the need for supplemental water for this irrigation system will remain the same. The supplemental portion from the proposed wells will be the same as from the old wells. Crystal Springs Creek is not listed as a dewatered stream by the Montana Dept. of Fish, Wildlife & Parks.**

Water quality - Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.

Determination: **With proper design and management of the flood irrigation system already in place, there should be little surface runoff. There may be up to 30% of the water that moves below the root zone in the normal course of flood irrigation. If nutrients and pesticides are properly applied, there should be little movement with this water. The water will likely be a source of recharge for the local shallow aquifer.**

Groundwater - Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.

Determination: **The applicant's testing indicates that water is available from the aquifer intersected by the proposed wells to supply the quantity of water requested in the application.**

DIVERSION WORKS - Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.

Determination: **The proposed wells are in an agricultural area just north of Helena, Montana. The general area is interlaced with residential and commercial developments. Historically there were few water features in the area, and all were of an intermittent nature. Most of these features have since been obliterated by the development mentioned above. There are no local channel or riparian areas that have not been disturbed by the current level of development.**

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species - Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater,

assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."

Determination: **The Montana Natural Heritage Program indicates that there are two species of concern in the general area of the proposed development. First, is Wedge-leaved Saltbush. Second, is Small Yellow Lady's-slipper. Both of these plants have not been observe in a number of years. Since the area of concern has been an active ranch and cultivated for several decades, the likelihood that these plants are present is remote.**

Wetlands - Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.

Determination: **There are wetlands at places along Crystal Springs Creek from the area in and around the Lewis & Clark Fairgrounds, and east, across Green Meadow Drive. Since the water use will not change, any interaction with those wetlands will remain the same. The replacement wells will be drilled about 1000 feet south of Crystal Springs Creek so there should be no wetland disturbance from the well construction.**

Ponds - For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.

Determination: **The only change proposed by this application is the replacement of two wells and the appurtenant diversion structures. These structures, covering only a few thousand square feet will not have an affect on wildlife or waterfowl. There are no fisheries in the immediate area of the well development or associated irrigated fields.**

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.

Determination: **Soils in the area are primarily the Meadowcreek and Fairway loams, with some Musselshell-Crago complex at the southeast corner of the property. The Meadowcreek and Fairway loams are deep, well-drained soils having 3 to 4 feet of loam, silt loam, or sandy loam at the surface. These soils are good for both flood and sprinkler irrigation as they have a moderate intake rate and a good water holding capacity.**

The Musselshell-Crago complex has a higher intake rate and a lower water holding capacity. These soils are often flood irrigated. They do require shorter irrigation set and larger heads of water (higher flow rates to "push" the water across the field). Irrigation of this soil complex will typically have a lower field efficiency. Because of the short irrigation runs at the corner of the field, the efficiency will not drop a great deal.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.

Determination: **The area of an acre or two around the proposed wells will be disturbed during the drilling of the replacement wells and the installation of the pumps and piping. This should be of short duration. Any runoff from the disturbed area will be filtered by ground cover in the adjacent irrigated field. Seeding the disturbed area around the replacement wells will assure quick establishment of a cover crop of grass or alfalfa around the wells.**

AIR QUALITY - Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.

Determination: **There will not be any affect on air quality from the proposed well development.**

HISTORICAL AND ARCHEOLOGICAL SITES - Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project.

Determination: **The State Historic Preservation Office indicated that there is a low likelihood that cultural properties will be impacted. Farming and ranching over the past several decades would likely have destroyed any cultural sites.**

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - Assess any other impacts on environmental resources of land, water and energy not already addressed.

Determination: **There will be no change in the impacts on land, water, and energy resources.**

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.

Determination: **There are no known environmental plans or goals for the area north of Helena.**

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.

Determination: **There will be no change in the quality of recreation in the area because of the proposed well development. The area of additional disturbance is small (See *Unique, Endangered, Fragile or Limited Environmental Resources/Ponds* above**). **The well will be on private land where the only recreation opportunities are hunting or hiking. Because of the associated irrigation next to the well, these activities will only be available in the early spring and late fall when the well pump is not operating.**

HUMAN HEALTH - Assess whether the proposed project impacts on human health.

Determination: **The change application will have no affect on human health.**

PRIVATE PROPERTY - Assess whether there are any government regulatory impacts on private property rights.
Yes ___ No _X_. If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.

Determination: There are no additional government regulatory impacts on private property associated with this change application.

OTHER HUMAN ENVIRONMENTAL ISSUES - For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.

Impacts on:

(a) Cultural uniqueness and diversity? **No significant impact.**

(b) Local and state tax base and tax revenues? **No significant impact.**

(c) Existing land uses? **No significant impact, the land use will not change.**

(d) Quantity and distribution of employment? **No significant impact.**

(e) Distribution and density of population and housing? **No significant impact.**

(f) Demands for government services? **No significant impact.**

(g) Industrial and commercial activity? **No significant Impact.**

(h) Utilities? **No significant impact. Three phases electric power to serve the pump motor is already present near the well site.**

(i) Transportation? **No significant impact.**

(j) Safety? **No significant impact.**

(k) Other appropriate social and economic circumstances? **No significant impact.**

2. Secondary and cumulative impacts on the physical environment and human population:

Secondary Impacts

There are no known secondary impacts due to the proposed supplemental irrigation well.

Cumulative Impacts

This development is for replacement wells only. It is not part of a trend to alter irrigation systems or methods. It does not switch the focus of the primary water source for the irrigation on the subject land or for other agricultural lands north of Helena.

3. Describe any mitigation/stipulation measures: **The applicant will plant a permanent crop in the area around the well to compete with weeds and provide erosion protection.**

4. Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:
There are no other alternatives to supply water to irrigate this parcel. Water from Crystal Springs Creek will not supply the full irrigation needs of the field. New diversions from surface water are not allowed under the Upper Missouri River Basin Closure.

PART III. Conclusion

1. Preferred Alternative: **The proposed plan for a groundwater well to supply supplemental irrigation water is the preferred alternative. Surface water sources in the area are closed to appropriation for irrigation so they cannot be used as a supplemental water supply.**

2. Comments and Responses:

3. Finding:
   Yes ___ No _X_ Based on the significance criteria evaluated in this EA, is an EIS required?

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action: **No significant impacts were identified, therefore and EIS is not necessary.**

Name of person(s) responsible for preparation of EA:
Name: **Jim Beck**
Title: **Agricultural Specialist**
Date: **March 15, 2005**